

TRACKING SEMANTIC OBJECTS IN VECTOR IMAGE SEQUENCES**ABSTRACT OF THE DISCLOSURE**

5 A semantic object tracking method tracks general semantic objects with multiple non-rigid motion, disconnected components and multiple colors throughout a vector image sequence. The method accurately tracks these general semantic objects by spatially segmenting image regions from a current frame and then classifying these regions as to which semantic object they originated from in the previous frame. To
10 classify each region, the method perform a region based motion estimation between each spatially segmented region and the previous frame to computed the position of a predicted region in the previous frame. The method then classifies each region in the current frame as being part of a semantic object based on which semantic object in the previous frame contains the most overlapping points of the predicted region. Using
15 this method, each region in the current image is tracked to one semantic object from the previous frame, with no gaps or overlaps. The method propagates few or no errors because it projects regions into a frame where the semantic object boundaries are previously computed rather than trying to project and adjust a boundary in a frame where the object's boundary is unknown.